

EN 55022:2006 + A1:2007  
EN 55024:1998 + A1:2001 + A2:2003  
**MEASUREMENT AND TEST REPORT**

For

**Xingtel Xiamen Group Co., Ltd.**

Xingtel Building, Chuangxin Road, Torch Hi-Tech Industrial District, Xiamen 361006, PR China

**Model: XL-2105IDM, TK-6060**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Corded Phone
<b>Test Engineer:</b> <u>Andy Xiong</u> <i>Andy Xiong</i>	
<b>Report Number:</b> <u>RSZ11032701-01</u>	
<b>Report Date:</b> <u>2011-06-21</u>	
<b>Reviewed By:</b> <u>Lisa Zhu</u> <i>Lisa Zhu</i> EMC Engineer	
<b>Prepared By:</b> Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008	

**Note:** This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP\*, or any agency of the Federal Government.

\* This report contains data that are not covered by the NVLAP accreditation and are marked with an asterisk "★" (Rev.2)

## **TABLE OF CONTENTS**

<b>GENERAL INFORMATION.....</b>	<b>4</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....	4
OBJECTIVE .....	4
RELATED SUBMITTAL(S)/GRANT(S).....	4
TEST METHODOLOGY .....	4
TEST FACILITY .....	4
<b>SYSTEM TEST CONFIGURATION.....</b>	<b>6</b>
DESCRIPTION OF TEST CONFIGURATION .....	6
SPECIAL ACCESSORIES.....	6
EQUIPMENT MODIFICATIONS .....	6
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS .....	6
EXTERNAL I/O CABLE.....	6
CONFIGURATION OF TEST SETUP .....	7
BLOCK DIAGRAM OF TEST SETUP .....	7
<b>SUMMARY OF TEST REPORT.....</b>	<b>8</b>
<b>EN 55022 §5.2- CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORT .....</b>	<b>9</b>
MEASUREMENT UNCERTAINTY.....	9
TEST SYSTEM SETUP.....	9
EMI TEST RECEIVER SETUP.....	10
TEST EQUIPMENT LIST AND DETAILS.....	10
TEST PROCEDURE .....	10
TEST RESULTS SUMMARY .....	10
TEST DATA .....	10
<b>EN 55022 §6-RADIATED DISTURBANCE .....</b>	<b>12</b>
MEASUREMENT UNCERTAINTY.....	12
TEST SYSTEM SETUP.....	12
EMI TEST RECEIVER SETUP.....	13
TEST EQUIPMENT LIST AND DETAILS.....	13
TEST PROCEDURE .....	13
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	13
TEST RESULTS SUMMARY .....	13
TEST DATA .....	14
<b>EN 55024 §4.2.1-ELECTROSTATIC DISCHARGES (IEC 61000-4-2).....</b>	<b>15</b>
TEST EQUIPMENT .....	15
TEST SYSTEM SETUP.....	15
TEST STANDARD .....	15
TEST PROCEDURE .....	16
TEST DATA AND SETUP PHOTO.....	16
<b>EN 55024 §4.2.2-ELECTRICAL FAST TRANSIENTS (IEC 61000-4-4) .....</b>	<b>19</b>
TEST EQUIPMENT .....	19
TEST SYSTEM SETUP.....	19
TEST STANDARD .....	19
TEST PROCEDURE .....	19
TEST DATA AND SETUP PHOTO.....	20
<b>EN 55024 §4.2.3.1-CONTINUOUS RADIATED DISTURBANCES (IEC 61000-4-3).....</b>	<b>21</b>
TEST EQUIPMENT .....	21

TEST SYSTEM SETUP .....	21
TEST STANDARD .....	22
TEST PROCEDURE .....	22
TEST DATA AND SETUP PHOTO .....	23
<b>EN 55024 §4.2.3.2-CONTINUOUS CONDUCTED DISTURBANCES (IEC 61000-4-6).....</b>	<b>27</b>
TEST EQUIPMENT .....	27
TEST SETUP .....	27
TEST STANDARD .....	27
TEST PROCEDURE .....	28
TEST DATA AND SETUP PHOTO .....	28
<b>EN 55024 §4.2.4-POWER-FREQUENCY MAGNETIC FIELDS (IEC 61000-4-8).....</b>	<b>31</b>
TEST EQUIPMENT .....	31
TEST SETUP .....	31
TEST STANDARD .....	31
TEST PROCEDURE .....	31
TEST DATA AND SETUP PHOTO .....	32
<b>EN 55024 §4.2.5-SURGES (IEC 61000-4-5) .....</b>	<b>33</b>
TEST EQUIPMENT .....	33
TEST SYSTEM SETUP .....	33
TEST STANDARD .....	33
TEST PROCEDURE .....	33
TEST DATA AND SETUP PHOTO .....	34
<b>EXHIBIT A - PRODUCT LABELING .....</b>	<b>35</b>
PROPOSED CE LABEL FORMAT .....	35
LABEL LOCATION ON EUT .....	35
<b>EXHIBIT B - EUT PHOTOGRAPHS .....</b>	<b>36</b>
EUT – TOP VIEW .....	36
EUT – BOTTOM VIEW .....	36
EUT – RJ11 PORT VIEW .....	37
EUT – LEFT SIDE VIEW .....	37
EUT – COVER OFF VIEW .....	38
EUT – MAIN BOARD TOP VIEW .....	38
EUT – MAIN BOARD BOTTOM VIEW .....	39
EUT – KEYBOARD TOP VIEW .....	39
EUT – KEYBOARD BOTTOM VIEW .....	40
EUT – LCD BOARD TOP VIEW .....	40
EUT – LCD BOARD BOTTOM VIEW .....	41
EUT – LOUDSPEAKER TOP VIEW .....	41
EUT – LOUDSPEAKER BOTTOM VIEW .....	42
<b>EXHIBIT C - TEST SETUP PHOTOGRAPHS .....</b>	<b>43</b>
CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORT - FRONT VIEW .....	43
CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORT - SIDE VIEW .....	43
RADIATED DISTURBANCE - FRONT VIEW .....	44
RADIATED DISTURBANCE - REAR VIEW .....	44
<b>PRODUCT SIMILARITY DECLARITY LETTER .....</b>	<b>45</b>

## GENERAL INFORMATION

### Product Description for Equipment Under Test (EUT)

The Xingtel Xiamen Group Co., Ltd.'s product, model number: XL-2105IDM or the "EUT" as referred to in this report is a *Corded Phone*, which measures approximately 22.0 cm (L) x 18.4 cm (W) x 6.0 cm (H). The highest operating frequency is 32.768 kHz.

*\*The product Corded Phone, the model TK-6060 is electrically and mechanically identical with the model XL-2105IDM, the difference between them is explained in the attached declaration letter.*

*\* All measurement and test data in this report was gathered from production sample serial number: 1103050 (Assigned by BACL, Shenzhen). The EUT was received on 2011-03-27.*

### Objective

The following test report is prepared on behalf of Xingtel Xiamen Group Co., Ltd. in accordance with EN 55022: Information technology equipment-Radio disturbance characteristics-Limits and methods of measurement. EN 55024: Information technology equipment- Immunity characteristics – Limits and methods of measurement.

The objective of the manufacturer is to determine compliance with EN 55022, EN 55024.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with CISPR 16-1-1:2003, specification for radio disturbance and immunity measuring apparatus and methods P1-1: radio disturbance and immunity measuring apparatus measuring apparatus. CISPR 16-1-4:2004, Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-4: Radio disturbance and immunity measuring apparatus -Ancillary equipment -Radiated disturbances. CISPR 16-2-1:2003, specification for radio disturbance and immunity measuring apparatus and methods P2-1: methods of measurement of disturbance and immunity conducted disturbance measurements. CISPR 16-2-3:2003 + A1:2005, specification for radio disturbance and immunity measuring apparatus and methods P2-3 methods of measurement of disturbances and immunity radiated disturbance measurements. CISPR 16-4-2:2003, Specification for radio disturbance and immunity measuring apparatus and methods-Part 4-2: Uncertainties, statistics and limit modeling-Uncertainty in EMC measurements

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 Meters.

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

### Special Accessories

The special accessories were supplied by Bay Area Compliance Laboratories Corp. (Shenzhen).

### Equipment Modifications

No modification was made to the unit tested.

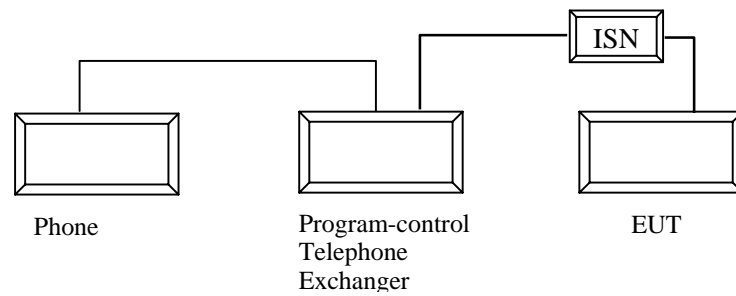
### Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
OneKe	Program-control Telephone Exchanger	TC-108H	N/A
TINANIAO	PHONE	TL2201	N/A

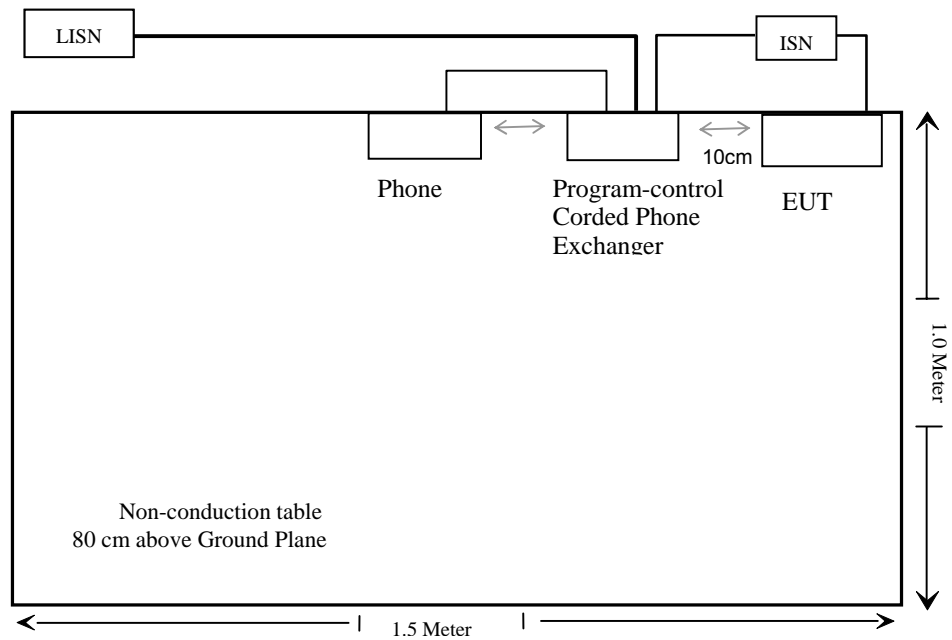
### External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Detachable RJ11 Cable	1.2	EUT	Telephone Exchanger

## Configuration of Test Setup



## Block Diagram of Test Setup



**SUMMARY OF TEST REPORT****EN 55022**

<b>RULE</b>	<b>DESCRIPTION</b>	<b>RESULTS</b>
§ 5.1	Conducted Disturbance at Mains Terminals	N/A
§ 5.2	Conducted Disturbance at Telecommunication Port	Compliance
§ 6	Radiated Disturbance	Compliance

**EN 55024**

<b>RULE</b>	<b>DESCRIPTION</b>	<b>RESULTS</b>
§4.2.1	Electrostatic Discharge IEC 61000-4-2	Compliance
§4.2.2	Electrical Fast Transients IEC 61000-4-4	Compliance
§4.2.3.1	Continuous Radiated Disturbance IEC 61000-4-3	Compliance
§4.2.3.2	Continuous Conducted Disturbance IEC 61000-4-6	Compliance
§4.2.4	Power Frequency Magnetic Fields IEC 61000-4-8	Compliance
§4.2.5	Surges IEC 61000-4-5	Compliance
§4.2.6	Voltage Dips And Interruptions, IEC 61000-4-11	N/A



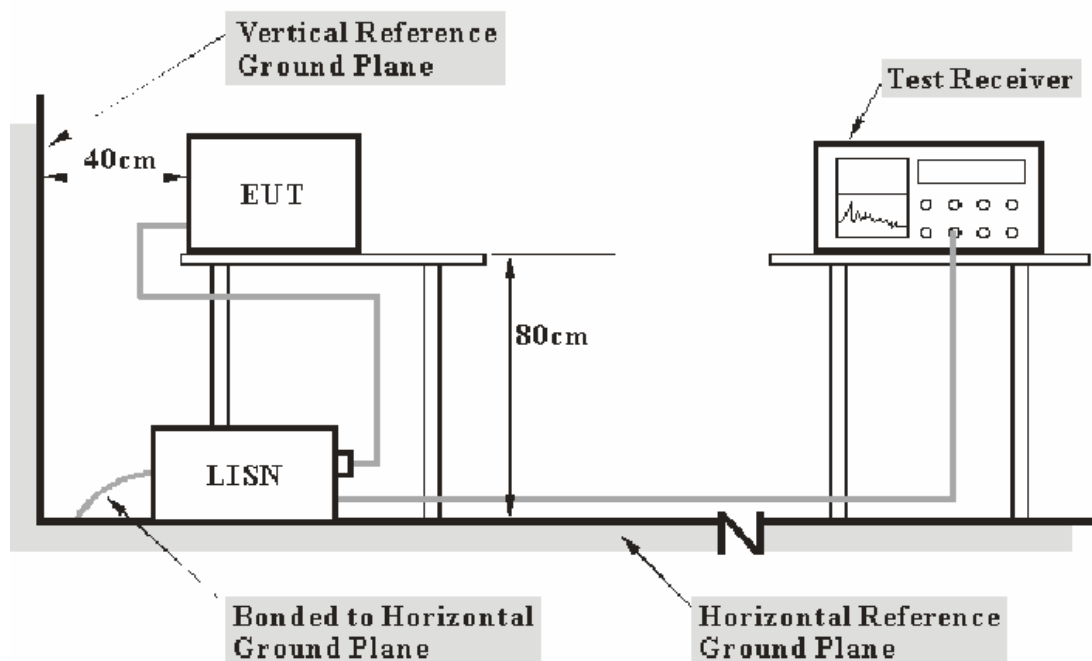
## EN 55022 §5.2- CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORT

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on CISPR 16-4-2, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp.(Shenzhen) is  $\pm 2.4$  dB ( $k=2$ , 95% level of confidence).

### Test System Setup



- Note:**
1. Support units were connected to second LISN.
  2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with CISPR 16-1-1:2003, CISPR 16-2-1:2003 measurement procedure. The specification used was the EN 55022 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<b><i>Frequency Range</i></b>	<b><i>IFBW</i></b>
150 kHz – 30 MHz	9 kHz

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2011-03-03	2012-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-03-09	2012-03-08
SCHWARZBECK	MESS-ELEKTRONIK	NTFM 8136	8136164	2010-10-26	2011-10-25
Com-Power	L.I.S.N.	LI-200	12208	N/A	N/A

\* Com-Power's LISN were used as the supporting equipment.

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the conducted emission test, the EUT was connected with the program-control telephone exchanger by ISN, and the program-control telephone exchanger was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance using all installation combination.

All data was recorded in the Quasi-peak and average detection mode.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the EN 55022 Class B, with the worst margin reading of:

**20.20 dB at 2.590 MHz in the RJ11 conducted mode**

## Test Data

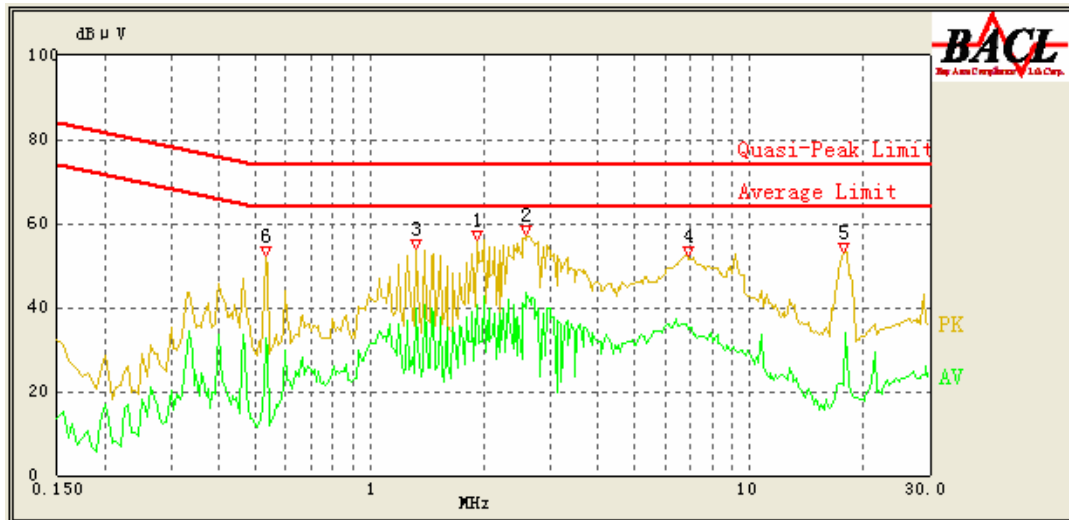
### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	48 %
<b>ATM Pressure:</b>	100.0 kPa

*The testing was performed by Andy Xiong on 2011-05-12.*

Test Mode: Talking

Communication port (RJ11 Port):



Conducted Emissions			EN 55022 Class B		
Frequency (MHz)	Corrected Result (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Remark (PK/Ave./QP)
2.590	53.80	10.10	74.00	20.20	QP
2.590	43.59	10.10	64.00	20.41	Ave.
1.925	52.24	10.10	74.00	21.76	QP
1.925	40.64	10.10	64.00	23.36	Ave.
1.325	49.65	10.10	74.00	24.35	QP
1.330	39.61	10.10	64.00	24.39	Ave.
0.530	48.41	10.10	74.00	25.59	QP
6.895	46.56	10.10	74.00	27.44	QP
6.840	36.06	10.10	64.00	27.94	Ave.
0.530	32.81	10.10	64.00	31.19	Ave.
17.835	21.34	10.10	64.00	42.66	Ave.
17.750	25.80	10.10	74.00	48.20	QP

## EN 55022 §6-RADIATED DISTURBANCE

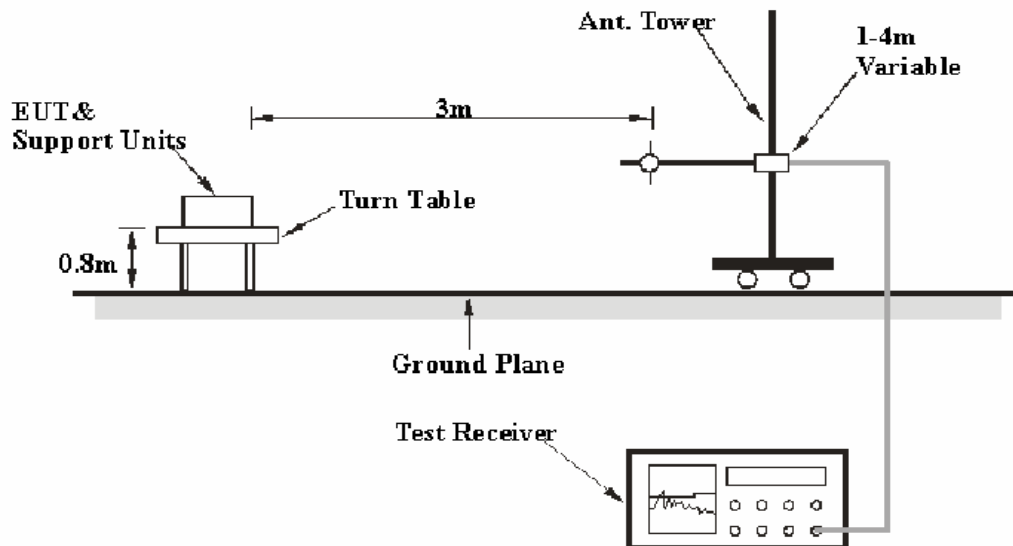
### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on CISPR 16-4-2, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 4.0$  dB ( $k=2$ , 95% level of confidence).

### Test System Setup

Below 1GHz:



The radiated emission tests were performed in the 3 meters chamber A test site, using the setup accordance with the CISPR 16-1-1: 2003, CISPR16-1-4:2004, CISPR 16-2-3: 2003 + A1: 2005. The specification used was EN 55022 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

## EMI Test Receiver Setup

The system was investigated from 30 MHz to 1 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

<i>Frequency Range</i>	<i>RBW</i>	<i>Video B/W</i>	<i>Detector</i>
30 MHz – 1000 MHz	100 kHz	300 kHz	QP

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447E	1937A01046	2010-08-02	2011-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2010-03-11	2011-03-10

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the radiated emissions test, the EUT was connected with program-control telephone exchanger and program-control telephone exchanger was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode from 30 MHz to 1 GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude.}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the EN 55022 Class B, with the worst margin reading of:

**15.7 dB at 45.699750 MHz in the Vertical polarization**

## Test Data

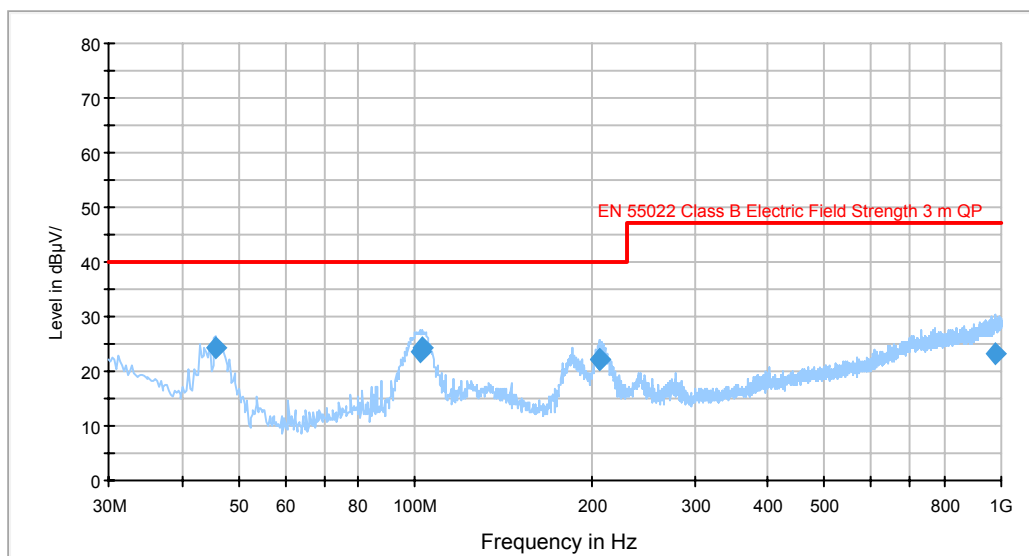
### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Andy Xiong on 2011-05-12.

Test Mode: Talking

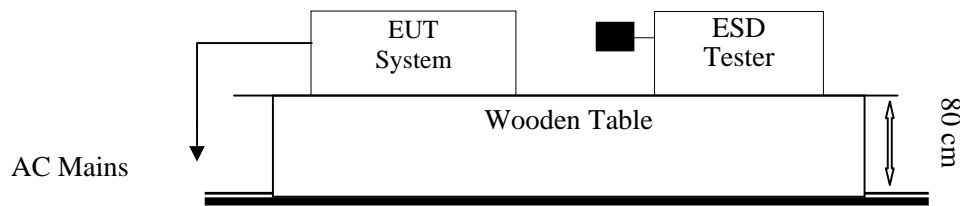
Auto Test(EN55022 Class B)



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna height (cm)	Antenna Polarity	Turntable position (deg)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
45.699750	24.3	131.0	V	171.0	-15.4	40.0	15.7
102.914000	24.2	255.0	H	160.0	-14.2	40.0	15.8
101.904000	23.7	291.0	H	177.0	-14.4	40.0	16.3
206.039500	22.1	102.0	H	258.0	-14.2	40.0	17.9
206.705750	22.1	126.0	H	258.0	-14.2	40.0	17.9
975.927250	23.2	209.0	H	190.0	1.2	47.0	23.8

**EN 55024 §4.2.1-ELECTROSTATIC DISCHARGES (IEC 61000-4-2)****Test Equipment**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM Test	ESD Tester	Dito	302105	2010-10-20	2011-10-19

**Test System Setup**

Remark: ■ is the tip of the electrode

IEC 61000-4-2 specifies that a tabletop EUT shall be placed on a non-conducting table which is 80 centimeters above a ground reference plane and that floor mounted equipment shall be placed on a insulating support approximately 10 centimeters above a ground plane. During the tests, the EUT is positioned over a ground reference plane in conformance with this requirement.

For tabletop equipment, a 1.5 by 1.0-meter metal sheet (HCP) is placed on the table and connected to the ground plane via a metal strap with two 470 k Ohms resistors in series. The EUT and attached cables are isolated from this metal sheet by 0.5-millimeter thick insulating material. A Vertical Coupling Plane (VCP) grounded on the ground plane through the same configuration as in the HCP is used.

**Test Standard**

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-2:1995)

Test level 3 for Air Discharge at  $\pm 8$  kV

Test level 2 for Contact Discharge at  $\pm 4$  kV

**Test Level**

Level	Test Voltage Contact Discharge ( $\pm$ kV)	Test Voltage Air Discharge ( $\pm$ kV)
1.	2	2
2.	4	4
3.	6	8
4.	8	15
X.	Special	Special

**Performance criterion: B**

## Test Procedure

### Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

### Contact Discharge:

All the procedure shall be same as Section 8.3.1 of IEC 61000-4-2, except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### Indirect discharge for horizontal coupling plane

At least 20 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1 m from the EUT and with the discharge electrode touching the coupling plane.

### Indirect discharge for vertical coupling plane

At least 20 single discharges shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

## Test Data and Setup Photo

### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

*The testing was performed by Andy Xiong on 2011-06-10.*

*Test Mode: Talking*



**Table 1: Electrostatic Discharge Immunity (Air Discharge)**

IEC 61000-4-2 Test Points Location	Test Levels							
	-2 kV	+2 kV	-4 kV	+4 kV	-8 kV	+8 kV	-15 kV	+15 kV
Plastic Surface (10 points)	A	A	A	A	A	A	/	/
Button (20 points)	A	A	A	A	A	A	/	/
LCD (10 points)	A	A	A	A	A	A	/	/
RJ11 Port (2 points)	A	A	A	A	A	A	/	/
Slot (10 points)	A	A	A	A	A	A	/	/

**Table 2: Electrostatic Discharge Immunity (Direct Contact)**

IEC 61000-4-2 Test Points Location	Test Levels							
	-2 kV	+2 kV	-4 kV	+4 kV	-6 kV	+6 kV	-8 kV	+8 kV
Screw (2 points)	A	A	A	A	/	/	/	/

**Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP)**

IEC 61000-4-2 Test Points Location	Test Levels							
	-2 kV	+2 kV	-4 kV	+4 kV	-6 kV	+6 kV	-8 kV	+8 kV
Front Side	A	A	A	A	/	/	/	/
Back Side	A	A	A	A	/	/	/	/
Left Side	A	A	A	A	/	/	/	/
Right Side	A	A	A	A	/	/	/	/

**Table 4: Electrostatic Discharge Immunity (Indirect Contact VCP)**

IEC 61000-4-2 Test Points Location	Test Levels							
	-2 kV	+2 kV	-4 kV	+4 kV	-6 kV	+6 kV	-8 kV	+8 kV
Front Side	A	A	A	A	/	/	/	/
Back Side	A	A	A	A	/	/	/	/
Left Side	A	A	A	A	/	/	/	/
Right Side	A	A	A	A	/	/	/	/

### Air Discharge



### Indirect Contact



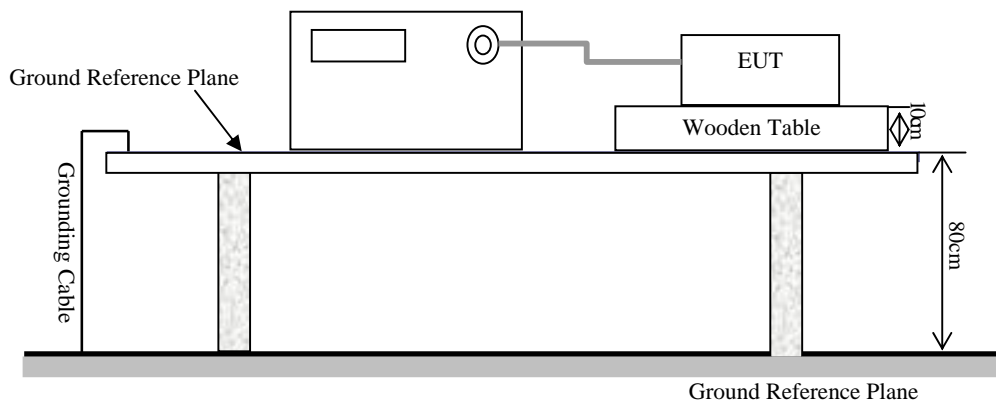
### Test Setup Photos

## EN 55024 §4.2.2-ELECTRICAL FAST TRANSIENTS (IEC 61000-4-4)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM Test	Ultra Compact Generator	UCS500-N5	V0939105172	2010-07-04	2011-07-04
EM Test	Auto-transformer	MV2616	V0939105173	2010-07-04	2011-07-04
EM Test	EFT Clamp	N/A	300886	2010-07-04	2011-07-04

### Test System Setup



### Test Standard

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-4:1995)  
Test level 2 at 0.5 kV (for RJ11 Port)

### Test Level

Open Circuit Output Test Voltage $\pm 10\%$		
Level	On Power Supply Lines	On I/O (Input/Output) Signal data and control lines
1	0.5 kV	0.25 kV
2	1 kV	0.5 kV
3	2 kV	1 kV
4	4 kV	2 kV
X	Special	Special

### Performance Criterion: B

### Test Procedure

The EUT was arranged for Power Line Coupling and for I/O Line Coupling through a capacitive clamp, where applicable. (Note: The I/O coupling test using a capacitive clamp is performed on the I/O interface cables that are longer in length than 3 meters.) A metal ground plane 2.4 meter by 2.0 meter was placed between the floor and the table and is connected to the earth by a 2.0 meter ground rod. The ground rod is connected to the test facility's electrical earth.

## Test Data and Setup Photo

### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Andy Xiong on 2011-06-17.

Test Mode: Talking

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
AC mains power input ports	L1	/	/	/	/	/	/	/	/
	L2	/	/	/	/	/	/	/	/
	Earth	/	/	/	/	/	/	/	/
	L1+L2	/	/	/	/	/	/	/	/
	L1 + Earth	/	/	/	/	/	/	/	/
	L2 + Earth	/	/	/	/	/	/	/	/
	L1+L2+Earth	/	/	/	/	/	/	/	/
Signal Port	RJ11 Port	A	A	/	/	/	/	/	/
	/	/	/	/	/	/	/	/	/



Test Setup Photo

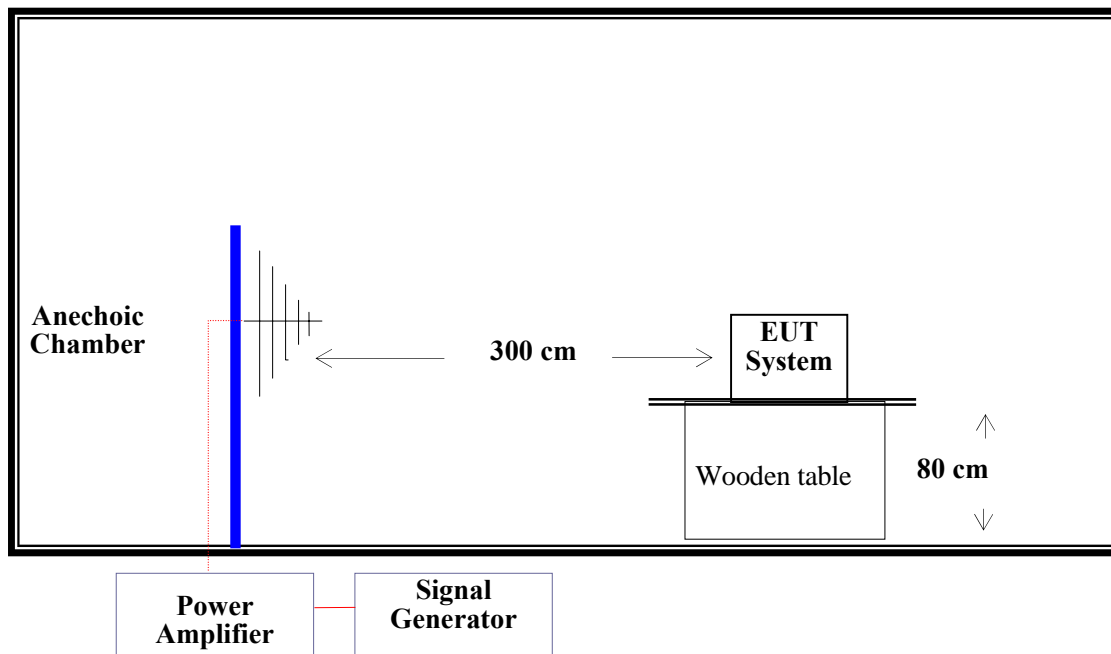
## EN 55024 §4.2.3.1-CONTINUOUS RADIATED DISTURBANCES (IEC 61000-4-3)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Amplifier Research	Amplifier Input/Output	200W1000/M2	15893	2011-01-14	2012-01-13
Amplifier Research	Field Meter	FM5004	302149	2011-03-26	2012-03-25
Amplifier Research	Sensor	FP5000	301825	2011-02-22	2012-02-21
HP	Signal Generator	8648C	3426A01345	2011-04-28	2012-04-27
Amplifier Research	Biconilog Antenna	AT1080	301902	2010-08-25	2011-08-25
Brüel & Kjær	Measuring Amplifier	2610	SA0252	2010-05-30	2011-05-30
Brüel & Kjær	Artificial Head	4602B	2174439	2010-09-18	2011-09-18
Brüel & Kjær	Microphone Standard	2669	2159984	2010-09-18	2011-09-18
Brüel & Kjær	Ear Simulator	4185	2190351	2010-09-18	2011-09-18
LISTEN	Power Supply	Sound Connect	1199PS165	2010-09-18	2011-09-18

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test System Setup



**Test Standard**

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-3:1995)  
Test level 2 at 3V / m

**Test Level**

Level	Field Strength V/m
1.	1
2.	3
3.	10
X.	Special

**Performance Criterion: A****Test Procedure**

The EUT and its simulators are placed on a turn table which is 0.8 meter above the ground. The EUT is set 3 meters away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarizations of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually.

In order to judge the EUT performance, a CCD camera and an artificial ear, sound level meter are used to monitor the EUT and the sound pressure level.

All the scanning conditions are as follows:

Condition of Test	Remarks
-----	-----
1. Field Strength	3 V/m (Test level 2)
2. Radiated Signal	AM 1 kHz 80% Modulation
3. Scanning Frequency	80 – 1000 MHz
4. Sweeping time of radiated	0.0015decade/s
5. Dwell Time	1Sec.

**Test Data and Setup Photo****Environmental Conditions**

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Andy Xiong on 2011-06-17.*

*Test Mode: Talking*

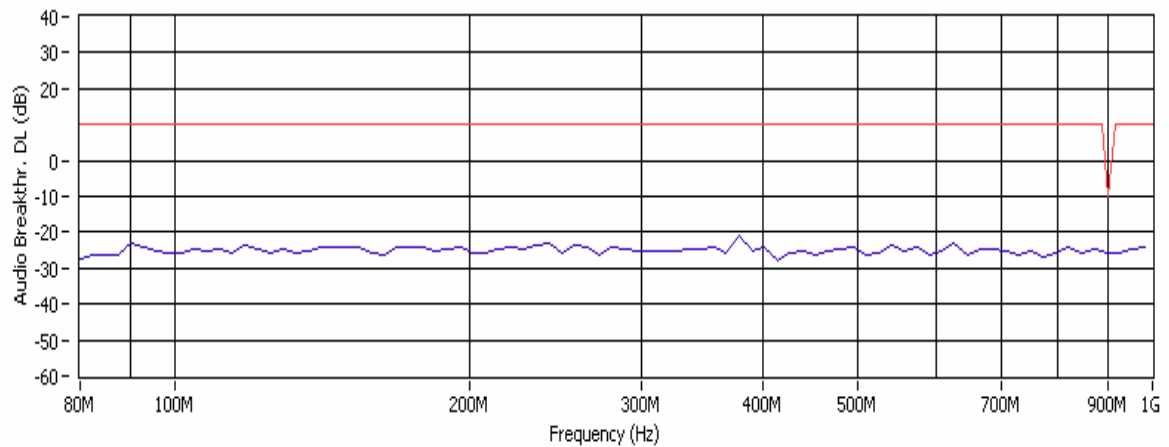
<b>Frequency Range (MHz)</b>	<b>Front Side (3 V/m)</b>		<b>Rear Side (3 V/m)</b>		<b>Left Side (3 V/m)</b>		<b>Right Side (3 V/m)</b>	
	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>
<b>80-1000</b>	A	A	A	A	A	A	A	A

The worst data was recorded as below

**Vertical: left side**

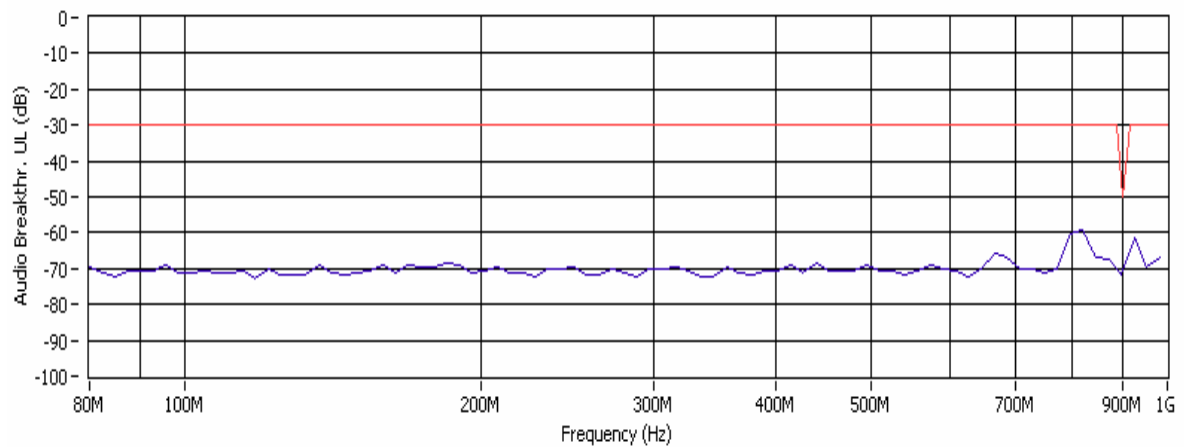
The Acoustic sound pressure level

WAVE1



The Noise signal

WAVE2

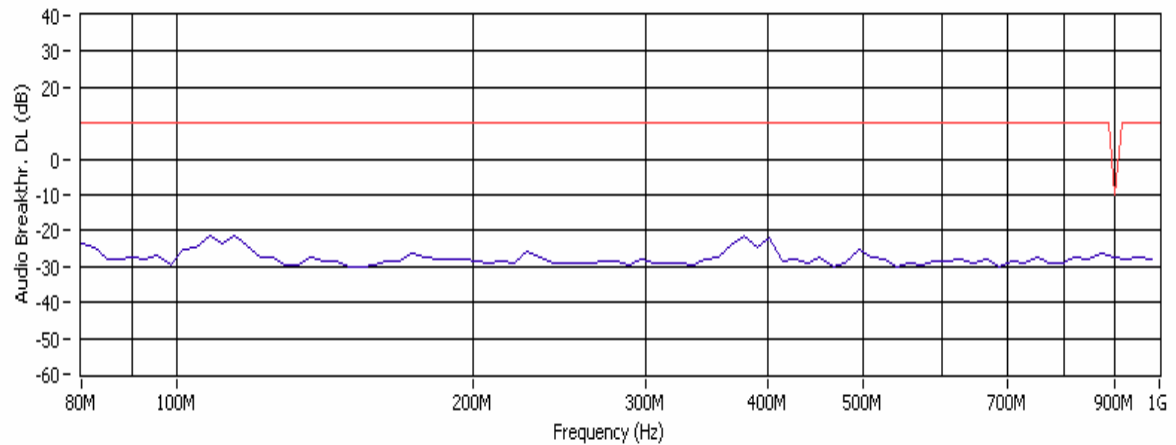




**Horizontal: left side**

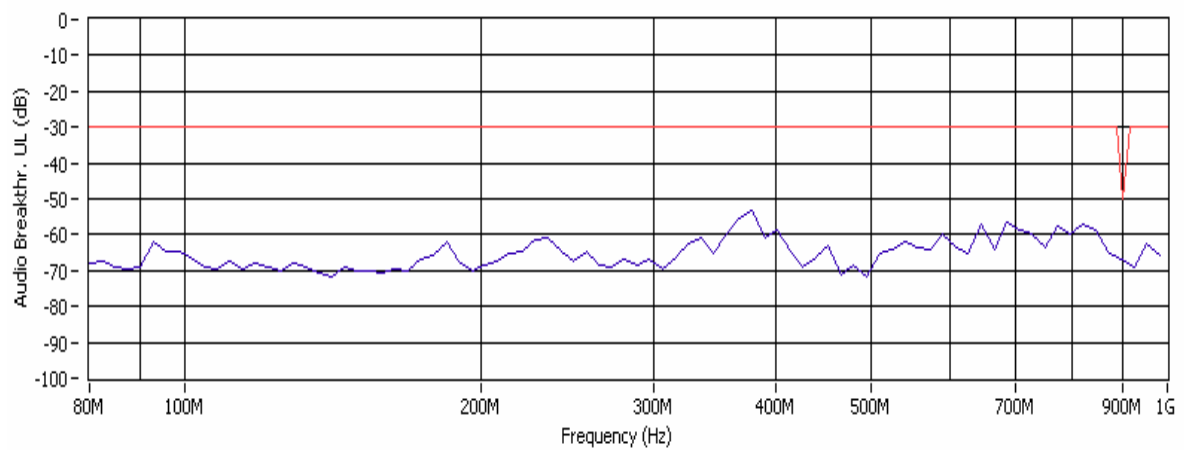
The Acoustic sound pressure level

WAVE1



The Noise signal

WAVE2

**Remark:**

1. 897-962 MHz the Noise signal limit is -50dBm.
2. 897-962 MHz the Acoustic sound pressure level limit is 55dB (spl).
3. Other frequency range, the Noise signal must less than -30dBm Limit.
4. Other frequency range, the Acoustic sound pressure level must less than 75dB (spl) Limit.



**Test Setup Photo**

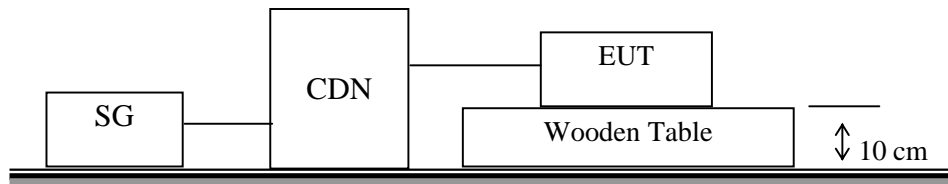
## EN 55024 §4.2.3.2-CONTINUOUS CONDUCTED DISTURBANCES (IEC 61000-4-6)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM	CDN	M3	1201-05	2011-03-09	2012-03-08
EM Test	C/S Tester	CWS500	303277	2010-11-10	2011-11-09
Amplifier Research	Attenuator	6dB	303282	2010-11-15	2011-11-14
EM Test	CDN	T2	1101-07	2011-03-09	2012-03-08
Brüel & Kjær	Measuring Amplifier	2610	2357868	2010-12-15	2011-12-14
Brüel & Kjær	Telephone Test Head	4602B	2174439	2010-09-18	2011-09-18
Brüel & Kjær	Microphone Standard	2669	2159984	2010-09-18	2011-09-18
Brüel & Kjær	Ear Simulator	4185	2190351	2011-03-12	2012-03-11
LISTEN	Power Supply	Sound Connect	1199PS165	2010-09-18	2011-09-18

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Setup



### Test Standard

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-6:1996)

Test level 2 at 3 V (e.m.f.), 0.15 MHz ~ 80 MHz,

### Test Level

Level	Voltage Level (e.m.f.) (V)
1	1
2	3
3	10
X	Special

**Performance Criterion: A**

## Test Procedure

- 1) Let the EUT work in test mode and test it.
- 2) The EUT are placed on an insulating support 0.1 m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3 m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
- 3) The disturbance signal described below is injected to EUT through CDN.
- 4) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
- 5) The frequency range is swept from 150 kHz to 80 MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1 kHz sine wave.
- 6) The rate of sweep shall not exceed  $1.5 \times 10^{-3}$  decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
- 7) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

## Test Data and Setup Photo

### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Andy Xiong on 2011-06-17.*

*Test Mode: Talking*

### Test Ports: Signal port (RJ11 Port)

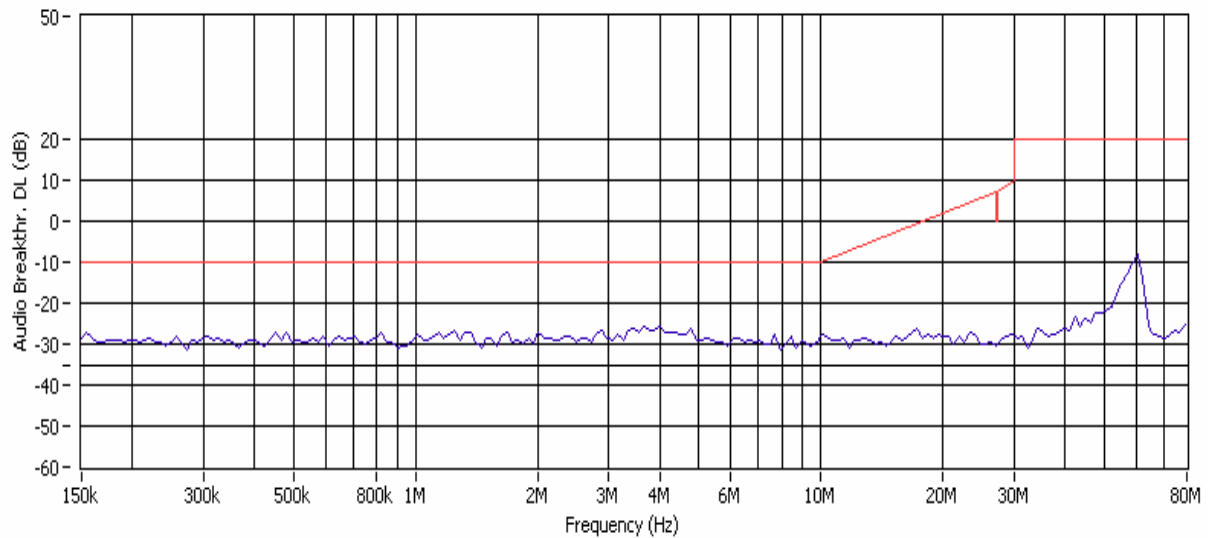
**Modulation:** Amplitude 80%, 1 kHz sine wave

**Test level:** 3V Un-modulated e.m.f.

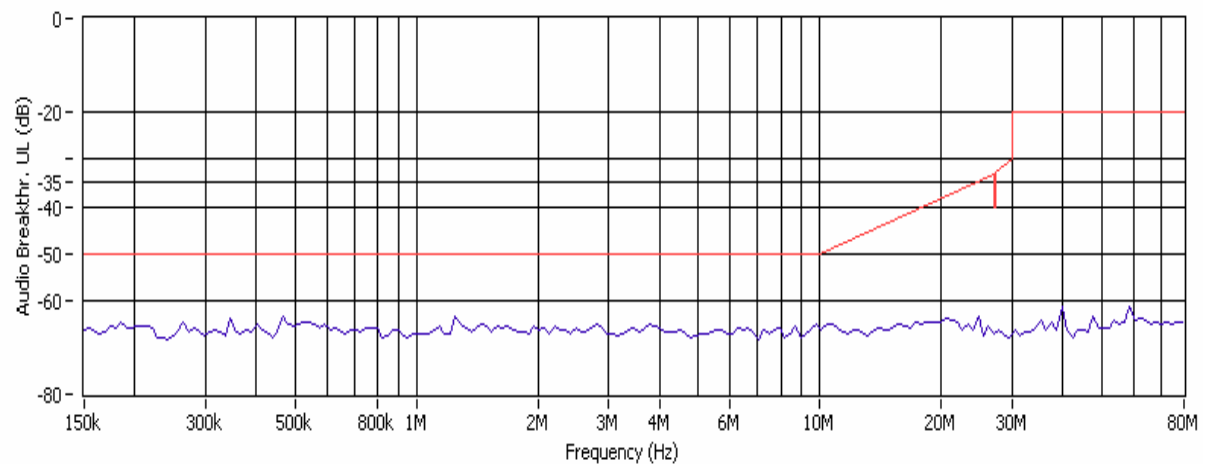
Level	Voltage Level (e.m.f.) $U_0$	Pass	Fail
1	1	/	/
2	3	A	/
3	10	/	/
X	Special	/	/

**CS (0.15MHz-80MHz) TEL line****The Acoustic sound pressure level**

UL CHART

**The Noise signal**

DL CHART



Remark:

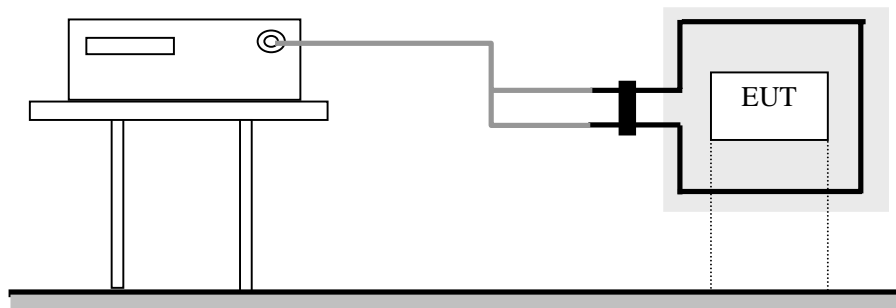
1. 0.150 MHz -10 MHz the Noise signal limit is -50dBm.
2. 0.150 MHz -10 MHz the Acoustic sound pressure level limit is 55dB(spl).
3. 10 MHz -30 MHz (except 26.95 MHz to 27.29 MHz) the Noise signal limit is -50dBm to -30 dBm.
4. 10 MHz -30 MHz (except 26.95 MHz to 27.29 MHz) the Acoustic sound pressure level limit is 55dB(spl) to 75dB(spl).
5. 26.95 MHz to 27.29 MHz the Noise signal limit is -40 dBm.
6. 26.95 MHz to 27.29 MHz the Acoustic sound pressure level limit is 65dB(spl).
7. 30 MHz -80 MHz the Noise signal limit is -20dBm.
8. 30MHz -80MHz the Acoustic sound pressure level limit is 85dB(spl).



**Test Setup Photo**

**EN 55024 §4.2.4-POWER-FREQUENCY MAGNETIC FIELDS (IEC 61000-4-8)****Test Equipment**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM Test	Ultra Compact Generator	UCS 500 N5	V0939105172	2010-07-04	2011-07-04
EM Test	Auto-transformer	MV2616	V0939105173	2010-07-04	2011-07-04
EM Test	Current Transformer	MC 2630	0309-59	2011-03-09	2012-03-08
EM Test	Loop Antenna	MS100	0809-05	2011-03-09	2012-03-08

**Test Setup****Test Standard**

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-8:1993)  
 Test level 1 at 1A/m

**Test Level**

Level	Magnetic Field Strength A/m
1	1
2	3
3	10
4	30
5	100
X.	Special

**Performance criterion: A**

**Test Procedure**

The EUT shall be subjected to the test magnetic field by using the induction coil of standard dimensions (1 m\*1 m). The induction coil shall then be rotated by 90° in order to expose the EUT to the test field with different orientations.

## Test Data and Setup Photo

### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50%
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Andy Xiong on 2011-06-17.*

*Test Mode: Talking*

Level	Magnetic Field Strength A/m	X (Horizontal)	Y (Vertical)	Z (Special)
1	1	A	A	A
2	3	/	/	/
3	10	/	/	/
4	30	/	/	/
5	100	/	/	/
X	Special	/	/	/

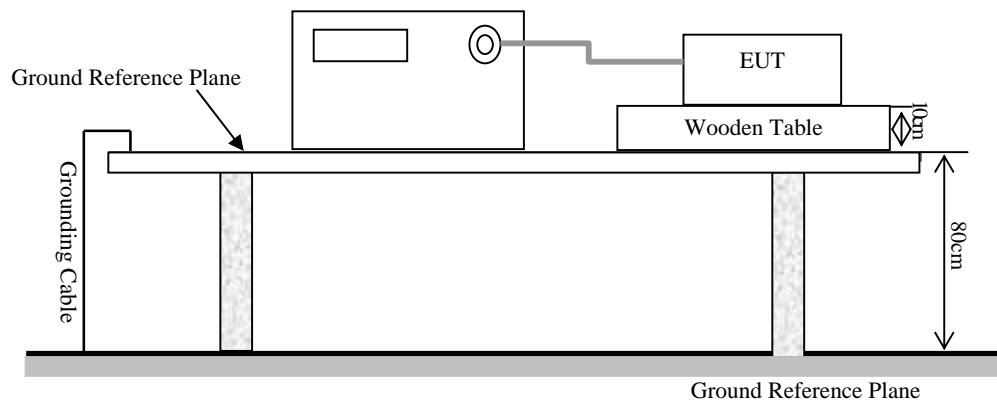


**Test Setup Photo**



**EN 55024 §4.2.5-SURGES (IEC 61000-4-5)****Test Equipment**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM Test	Ultra Compact Generator	UCS500-N5	V0939105172	2010-07-04	2011-07-04
EM Test	Auto-transformer	MV2616	V0939105173	2010-07-04	2011-07-04
EM Test	Coupling Decoupling Network	CNV 504N	V0939105174	2010-07-04	2011-07-04

**Test System Setup****Test Standard**

EN 55024:1998 + A1:2001 + A2:2003 (IEC 61000-4-5:1995)  
Signal port (RJ11 port): Line-Ground: Test level 2 at 1 kV;

**Test Level**

Level	Open Circuit Output Test Voltage $\pm 10\%$
1	0.5 kV
2	1 kV
3	2 kV
4	4 kV
X	Special

**Performance criterion: B**

**Test Procedure**

- (1) For line to line coupling mode, provide a 0.5 kV 1.2/50us voltage surge (at open-circuit condition).
- (2) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- (3) Different phase angles are done individually.
- (4) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

**Test Data and Setup Photo****Environmental Conditions**

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	100.0 kPa

*The testing was performed by Andy Xiong on 2011-06-17.*

*Test Mode: Talking*

Table 1: Signal port (RJ11 Port)

Level	Voltage	Poll	Path	Pass	Fail
1	0.5 kV	±	Line-Ground	A	/
2	1 kV	±	Line-Ground	A	/
3	2 kV	±	Line-Ground	/	/
4	4 kV	±	Line-Ground	/	/



**Test Setup Photo**

## EXHIBIT A - PRODUCT LABELING

### Proposed CE Label Format



Specification: Text is Black or white in color and is left justified. Labels are printed in indelible ink on permanent adhesive backing and shall be affixed at a conspicuous location on the EUT or silk-screened onto the EUT.

### Label Location on EUT



Label here

## **EXHIBIT B - EUT PHOTOGRAPHS**

**EUT – Top View**



**EUT – Bottom View**



### EUT – RJ11 Port View



### EUT – Left Side View

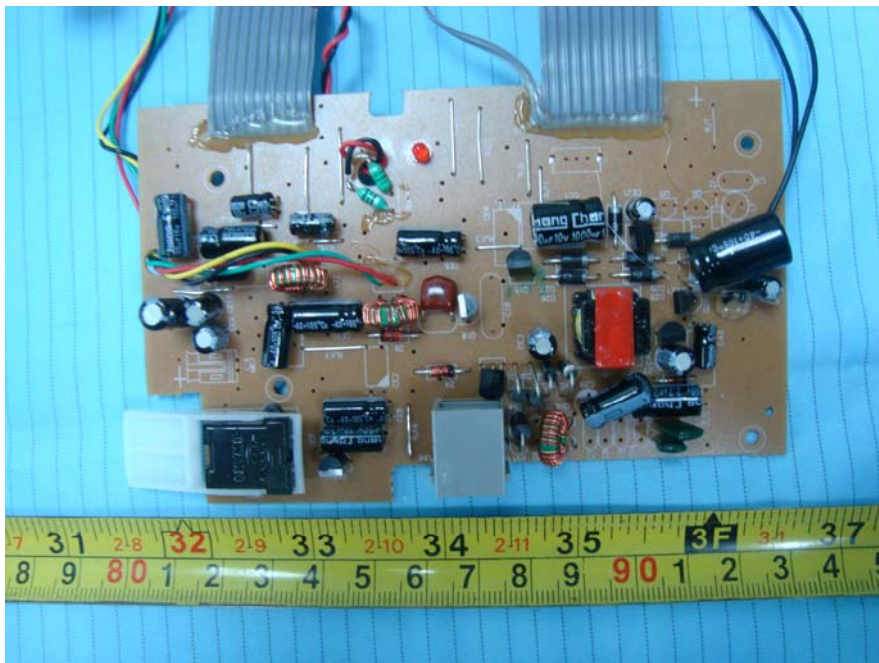




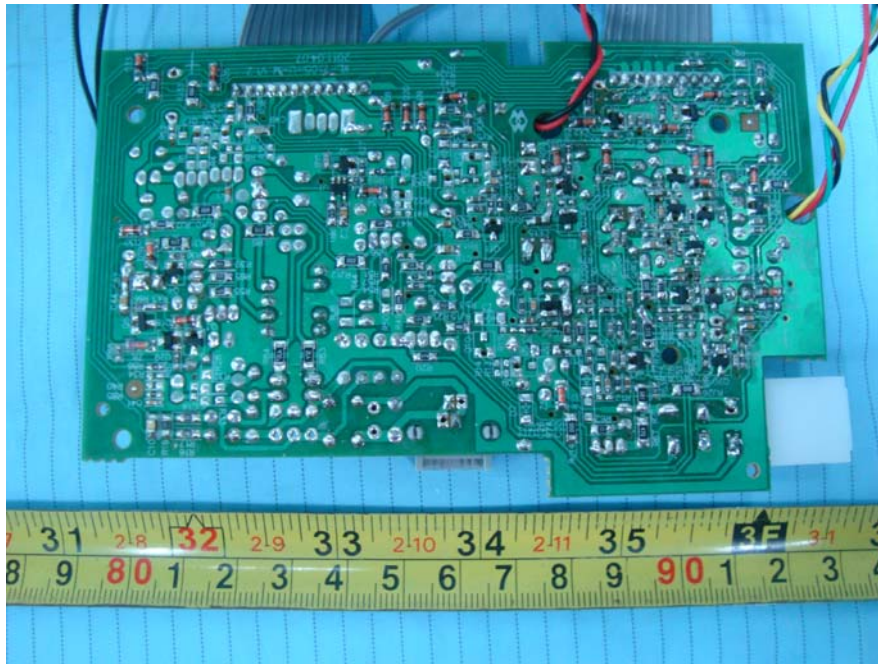
### EUT – Cover off View



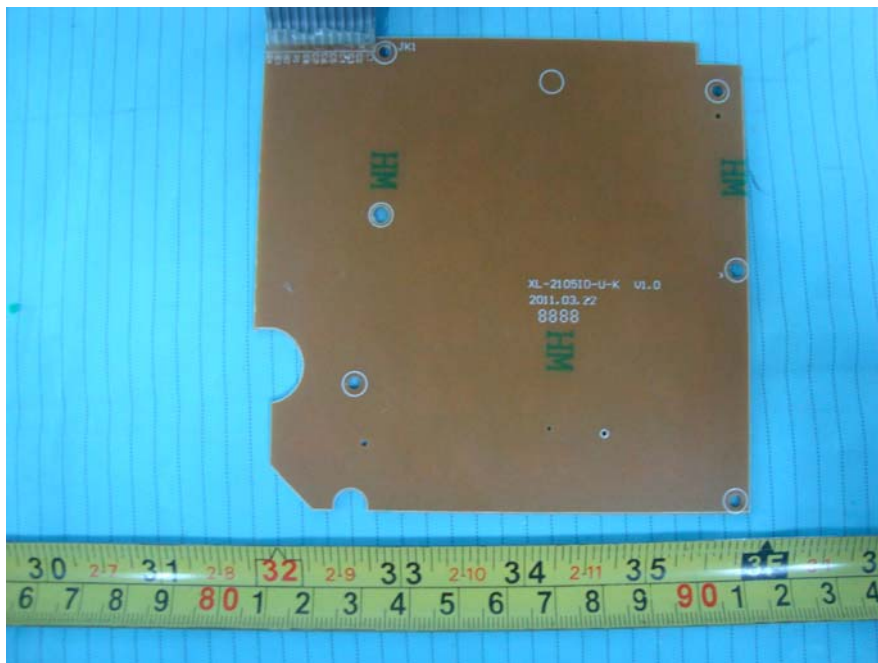
### EUT – Main Board Top View

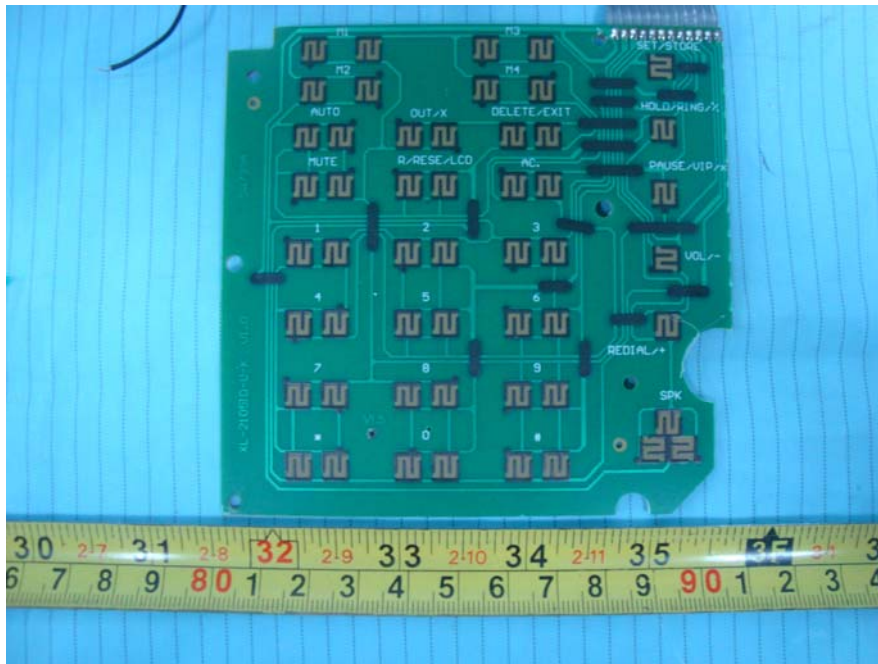
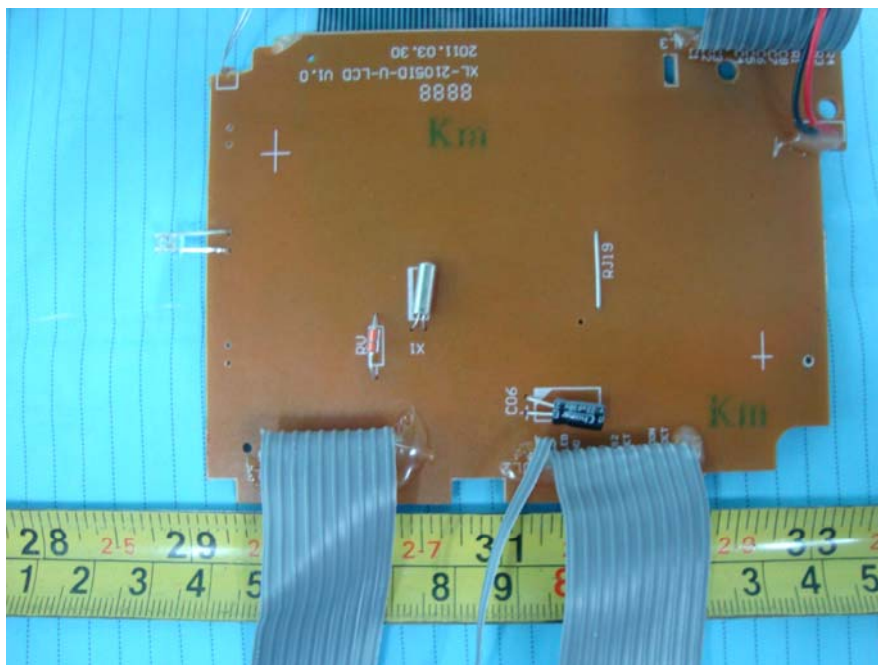


### EUT – Main Board Bottom View



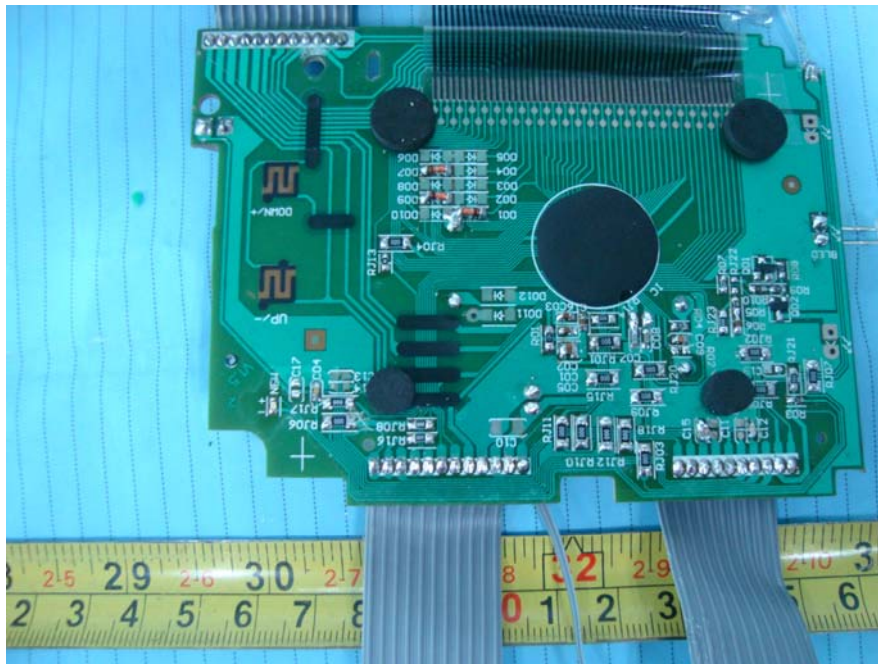
### EUT – Keyboard Top View



**EUT – Keyboard Bottom View****EUT – LCD Board Top View**



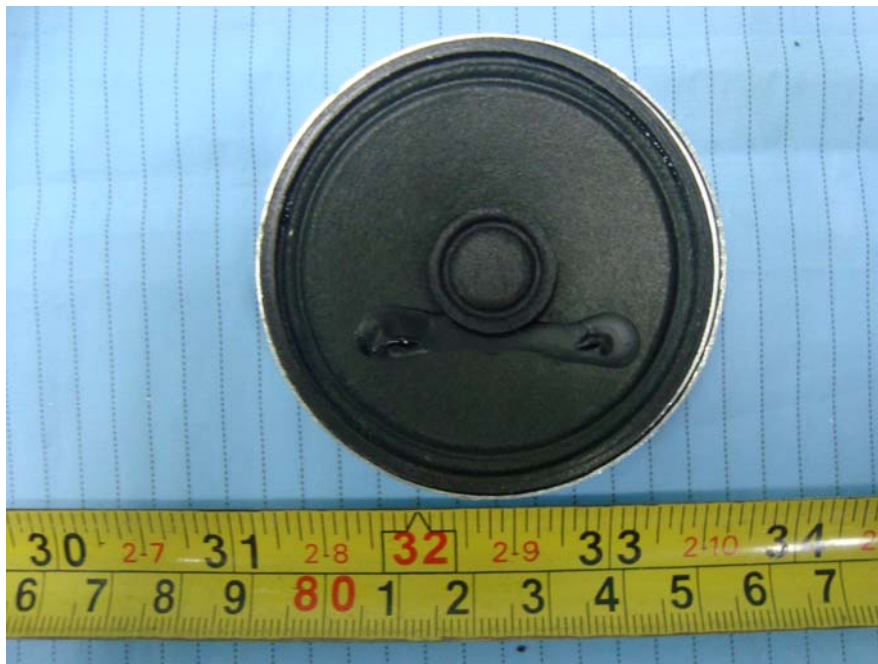
### EUT – LCD Board Bottom View



### EUT – Loudspeaker Top View



### EUT – Loudspeaker Bottom View



## EXHIBIT C - TEST SETUP PHOTOGRAPHS

**Conducted Disturbance at Telecommunication Port - Front View**



**Conducted Disturbance at Telecommunication Port - Side View**





### **Radiated Disturbance - Front View**



### **Radiated Disturbance - Rear View**



## PRODUCT SIMILARITY DECLARITY LETTER



XINGTEL XIAMEN ELECTRONICS CO., LTD.  
Xingtel Building, Chuangxin Road, Torch Hi-Tech Industrial  
District, Xiamen 361006, PR China  
E-mail: info@xingtel.com Website: http://www.xingtel.com

Tel: +86-592-562-5929  
+86-592-603 6442  
Fax: +86-592-603-7860

To: Bay Area Compliance Laboratories Corp

### Declaration of Similarity

To whom it may concern,

We,  
Xingtel Xiamen Electronics Co., Ltd.  
Address: Xingtel Building, Chuangxin Road, Torch Hi-tech Industrial District, Xiamen, 361006,  
China

Hereby declare that  
Product Name: **Corded Phone**  
Model No. **TK-6060**

belong to **TESAN ILETISIM A.S.** with the trade name is **TTEC PLUS**, it is exactly same with the  
telephone model no. **XL-2105IDM**, and belong to **Xingtel**. These two models are electrically  
and mechanically identical, The only difference between them is the model name!

Regards,  
Xingtel Xiamen Electronics Co., Ltd.

Simon Liu

Director

April 26, 2011

\*\*\*\*\* END OF REPORT \*\*\*\*\*